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## COCCIDÆ OF THE CONIFERA. SUPPLEMENT NO. I. DESCRIPTION OF TWO NEW SPECIES.

By George A. Colfman, Sisson, Califorvia.<br>(With Plates IV and V.)

Pseudococcus cupressi, new species. (Pl. IV, Figs. 1-4.)
Female and Ovisac. Length 6 mm ., width 3.5 mm .; color olive-brown; body sparsely covered with white powdery wax; margins with tufts of same; last abdominal segment with large tuft on either side of anal ring; a wax cylinder about $\cdot 5$ mm . in length protruding from above anus; dorsal surface marked by two dorsomedian and marginal rows of large black spotsat each segmental margin. Formula for antennal segments: $3,4,8(2,5)(1,6), 7$; third largest, seventh shortest. Legs 2 mm . in length, reaching slightly beyond margin of body when walking.

Soung. Olive-gray in color; length 9 mm ., width .52 mm . Antenme 7 jointed, length .5 mm ., third joint longest.

Fgg - in whitish waxy cocoon - $45 \mu$ long and $30 \mu$ wide.
Adult Male. Length, head and body, 3 mm ., wing 3.5 mm ., antenne 3.5 mm ., caudal appendages 3 mm . Color: body dark gray with lighter margins, head and thorax black, antenna gray-black, legs similar to antenne, wings smoky, caudal appendages white. Antenne 10-jointed, sixth joint longest.

Life History. This species was discovered by the atthor on the Monterey cypress (Cupressus macrocarpa) at Cypress Point, near Pacific Grove, California, January 25, 1904. The female and young spend most of their lives clustered about the base of cypress cones, living on the sap which exudes from the base of the cone. 'The female begins to spin wax for her egg-sacs early in January and the eggs are deposited in the latter part of January or in February. The males
appear about the time the females begin to spin their egg-sacs and continue to appear through January, February and March. The young hatch out about April 1 , and are active through the summer and fall months. About November 1 they disappear and are found from that time to January in the crevices of the bark and in open cones. The male cocoons are found mostly in open, dead cocoons.

Xylococcus macrocarpæ, new species. (Pl. V, Figs. 1-3.)
Adult Female. Length 6 mm ., width 3 mm .; shape oblong-oval ; color dark olive-brown. Antennæ 1 mm . in length, light brown in color. Legs light yellow, extending slightly beyond margin of body. Antennæ S- or possibly 9-jointed (the second joint is apparently divided into two, but the division is not often distinct); formula for $S$-jointed antenna: $2,1(3, \mathcal{S})(5,6,7), 4$.

Eggs. Lemon-yellow, length .6 mm ., diameter .35 mm .
Koung (larvæ just hatched). Length .7 mm ., width . 3 mm .; antennæ 6 .jointed (the 6th longest, 2, 3, 4, 5 subequal); color yellow.

Adult Male. Length : body 2 mm ., width across thorax .8 mm ., wings 3 mm . long by 1 mm . broad, expanse about 7 mm .; color of head and thorax dark brown, abdomen yellow, with bands of brownabove and below, wings cinereous; veins blackish ; only one distinct branch to discoidal vein.

Life History'. So far as I have been able to trace the different stages and transformations in this species, the life history is almost identical with that of Xylococcus betule Pergande, as described in Bulletin No. 18, New Series, U. S. Department of Agriculture, Bureau of Entomology. About the only difference I can discover is that in the cysted stage the females do not gather in groups, but are quite evenly and singly distributed under the bark, the was tubes being found in crevices in the bark.

## Description of the Plates. <br> Plate IV. <br> (Pseudococcus cupressi sp. nov.)

Fig. I. Adult female (dorsal view).
Fig. 2. Same (ventral view); $a$, leg ; $b$, antenna.
Fig. 3. Young individual ; $a$, leg; $b$, antenna.
Fig. 4. Head of male ; $a$, leg ; $b$, antenna ; $c$, penis of same.

## Plate V.

(. Xylococcus macrocartie sp. nov.)

Fig. I. Adult female ; $a$, antenna; $b$, leg of same.
Fig. 2. Adult male; $a$, leg of same.
Fig. 3. Young individual; $a$, leg; $b$, antenna of same.

